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A. JUDSON, "PASSIVE SMOKING AS A CAUSE OF HEART 25 25 27 JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY 34: 846-554, 1994

## Summary

Based on a selective review of the literature, this 1994 article argues: (1) that is biologically plausible for ETS exposure to cause heart disease, (2) that the epidemiological data support an increased statistical risk in heart disease death rate in nonsmokers exposed to ETS, and (3) that the statistics suggesting an increased risk can be translated into a total number of heart disease deaths each year from ETS exposure.

The general technique for these calculations was to assume a level of increased heart disease risk in nonsmokers exposed to ETS, and then to enter this level of increased risk into an equation which took into account population estimates of ETS exposure and overall heart disease death rates. The actual statistical calculations of death rates were quite complicated because of various detailed assumptions that Wells made about exposure levels, death rates, potential errors in the data and other risk factors.

Wells said he attempted to make his calculations comparable to the 1992 EPA risk assessment on lung cancer. This comparability related to such issues as statistical techniques used, underlying assumptions and use of 1985 statistics on U.S. death rates.

Based on the epidemiological data, Wells calculated that the overall relative risks for heart disease associated with ETS exposure were 1.22 for women and 1.53 for men. According to Wells' calculations, this means that ETS is associated with 33% (women) to 43% (men) as many heart disease deaths as those associated with active smoking. For both sexes combined, Wells calculated that 62,000 U.S. heart disease deaths in 1985 were associated with ETS exposure.

## Responsive Points

1. A.J. Wells is an American Lung Association consultant whose antismoking opinions have been well-publicized for many years.

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